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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Takashi Inoue

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EXAMINER

O'HERN, BRENT T

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,322	Applicant(s) INOUE ET AL.	
	Examiner BRENT T. O'HERN	Art Unit 1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,7-18,24-29,31 and 36 is/are pending in the application.
- 4a) Of the above claim(s) 24-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,7-18,31 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 1, 7-18, 24-29, 31 and 36 are pending with claims 24-29 withdrawn and claim 36 new.

WITHDRAWN REJECTIONS

2. All rejections of record in the Office action mailed 12/17/2009 have been withdrawn due to Applicant's amendments in the Paper filed 3/16/2010.

NEW REJECTIONS

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1, 7-12, 17-18, 31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1057840 in view of Okada et al. (JP 2003144050), DE 19826143 (SUWELACK NACHF) and Kino et al. (US 6,231,907).

GB 1057840 teaches a method of extracting volatile components by which volatile components are obtained by steam extraction within a sealed container (*See page 2, Example, with a sealed extraction process.*) and roasting of tasty materials/ (roasted coffee beans), the method comprising directing steam with the tasty material; and cooling, freeze-drying and recovering the steam after said directing steam, wherein the steam extraction is carried out using steam at normal pressure (*See page 2, Example, and pp. 1-2 where the process takes place at normal, atmospheric, pressure.*), however, fails to expressly disclose using super heated steam for

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extraction/roasting is set to a temperature higher than 140 °C but no higher than 500 °C per claims 1 and 11, wherein a steam flow rate of 0.3 to 30 kg/hr is used per 1 kg of tasty material per claim 1 or 1 to 30 kg/hr per kg of raw coffee beans per claim 12, wherein said directing step is carried out for 5 to 30 minutes per claim 1, and wherein a recovery rate of the volatile components by the steam extraction is 0.01 to 10% by weight as a solid with respect to the tasty material per claim 1, and the coffee beans being at least one type selected from the group consisting of *Coffea arabica*, *C. canephora* var. *robusta*, *C. canephora* vat. *conulon* and *C. liberica*.

However, Okada ('050) teaches using superheated steam to process/roast coffee at a temperature from 200 °C to 400 °C for 5 to 15 minutes (*See Abstract and paras. 10-16 and 27.*) for the purpose of removing aromatic scents from arabika coffee (*See paras. 14 and 32.*).

DE 19826143 teaches a method of extracting volatile components by which volatile components are obtained by steam extraction within a sealed container (*See pp. 2-5.*) and roasting of tasty materials/ (roasted coffee beans) (*See p. 2, para. 1.*), the method comprising directing steam into contact with the tasty material (coffee beans) (*See pp. 2-5.*); and cooling, freeze-drying and recovering the steam (*See p. 4, paras. 10-11.*), wherein the steam is from 150-240 °C at the extraction time is a time that is sufficient to recover the desired volatile material (*See p. 2, paras. 6-7 and 13.*). Since the composition of materials to be extracted differs (*See p. 2, paras. 1-2.*) it would have been obvious that the extraction temperature and time will vary accordingly. The

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extracts and obtained volatiles are combined (*See p. 4, paras. 10-11, p. 2, paras. 1-2, 8 and p. 3, para. 13.*) for the purpose of providing a soluble coffee (*See p. 2, para. 1.*).

Okada ('050) illustrates the times and temperatures that are required to remove aromatic material from coffee. DE 19826143 teaches, as discussed above, using similar temperatures to remove aromatic material to form a coffee concentrate that is similar to that in GB 1057840 and claimed. The extraction time is a function of the material/coffee beans to be processed, steam temperature, flow rate, vessel size, agitation, vessel configuration, atmospheric conditions and other common variables known in the extraction art. A person having ordinary skill in the art would know how to make the appropriate routine adjustments.

Regarding the temperature, rate and amount of steam addition, it would have been obvious to one having ordinary skill in the to adjust the temperature, amount of super heated steam for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding the recovery rate, GB 1057840 teaches that 100 to 175 ccs of condensate is obtained per kg of coffee steamed and the steam distillate and the extract having a 10-30 % dry content (*See p. 2.*), thus, it would have been obvious that this amount equates to the amount claimed. Furthermore, the amount recovered is a function of the time processed, thus, the amount can be more or less based on user preference and manufacturing requirements.

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Kino ('907) teaches using deoxygenated water coffee processing (*See col. 5, ll. 5-33.*) for the purpose of providing high quality coffee (*See col. 5, ll. 34-45.*).

Furthermore, it was known in the art that prior to generating steam, the air, which includes oxygen is typically removed from the water for the purpose of minimizing the corrosive action and mechanical stress that non-condensable air can have on boiler/steam equipment. It was known that the non-condensable oxygen in the steam leads to lower condensation/distillation efficiency since it presents a barrier to condensation and does not provide the vacuum as is the case with condensable steam and aromas.

Therefore, it would have been obvious to a person having ordinary skill in the art that the recovery as taught by GB 1057840 would be the amount as claimed.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made to use steam at the above temperature and time as taught by Okada ('050) and DE 19826143 and the above proportional amount in GB 1057840 and to use deoxygenated water as taught by Kino ('907) in order to recover/remove the above aromatic materials by an effective and efficient process without prematurely degrading the processing equipment.

5. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1057840 in view of Okada et al. (JP 2003-144050), DE 19826143 (SUWELACK NACHF), Kino et al. (US 6,231,907) and Takano et al. (US 5,417,993).

GB 1057840, Okada ('050), DE 19826143 and Kino ('907) teach the method discussed above, however, fail to expressly disclose wherein the coffee beans are

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obtained by roasting raw coffee beans using at least one type of method selected from the group consisting of far infrared roasting, hot air roasting, direct flame roasting and charcoal roasting and wherein the L value of the roasted coffee beans is 15 to 33.

Takano ('993) teaches roasting coffee beans either using an electric sample roaster or by using gas-grill type until the desired L-value is achieved (*See col. 5, l. 25.*) with the L-value being within the range of 15 to 30 (*See col. 5, l. 31.*) for the purpose for the purpose of providing a coffee with improved and enriched aroma (*See Abstract.*). Furthermore, the above roasting methods are interpreted as substitutes and all capable of producing the same products.

Therefore, it would have been obvious to use to the above roasting method to provide coffee beans with the above L-value as taught by Takano ('993) in GB 1057840 in order to provide a coffee with improved and enriched aroma.

6. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1057840 in view of Okada et al. (JP 2003144050), DE 19826143 (SUWELACK NACHF), Kino et al. (US 6,231,907) and Kazuyuki et al. (JP 2003-033137).

GB 1057840, Okada ('050), DE 19826143 and Kino ('907) teach the method discussed above, however, fail to expressly disclose wherein the tasty material includes of tea leaves following tea manufacturing wherein the tea leaves are at least one type selected from the group consisting of green tea, oolong tea, black tea, barley tea, adlay tea, jasmine tea, Pu-Erh tea, rooibos tea and herb tea.

However, Kazuyuki ('137) teaches extracting volatile components by steam distillation and obtaining components after steaming (*See Abstract and paras. 30, 35*

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and 37.), with the volatile components extracted being from tea, green tea, or oolong tea and arabica coffee (*See Abstract and paras. 30 and 37.*), with the L value of the roasted coffee beans being 15 to 33 (*See paras 30-31 and 35.*) for the purpose of providing a tea drink with a good tea balance (*See para. 6.*).

Therefore, it would have been obvious to extract volatile components from the above teas as taught by Kazuyuki ('137) with GB 1057840's modified process in order to provide a tea drink with a good tea balance.

ANSWERS TO APPLICANT'S ARGUMENTS

7. In response to Applicant's arguments (*See p. 8, para. 1 of Applicant's Paper filed 3/16/2010.*) that claim 1 includes limitations from claim 23, it is noted that the Examiner concurs, however, claim 1 also includes other limitations which are addressed above.

8. In response to Applicant's comments (*See p. 8, para. 1 to p. 9, para. 2 of Applicant's Paper filed 3/16/2010.*) discussing how amended claim 1 produces a product with superior quality, it is noted that said comments have been considered.

9. In response to Applicant's arguments (*See p. 9, paras. 3-4 of Applicant's Paper filed 3/16/2010.*) that GB 1057840 does not expressly discuss the temperature of its steam or the steam being superheated, it is noted that the Examiner does not disagree.

10. In response to Applicant's arguments (*See p. 9, paras. 5-6 of Applicant's Paper filed 3/16/2010.*) that Okada teaches removing unpleasant smells from beans and these smells would not be used to flavor foods or drinks, it is noted that the Examiner does not disagree. The Examiner cites Okada for teaching typical extraction temperatures for coffee as GB 1057840 is silent. Furthermore DE 19826143 teaches the same

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extraction temperatures as set forth in the claims and wherein the desirable aromas are concentrated.

11. In response to Applicant's arguments (*See p. 10, para. 3 of Applicant's Paper filed 3/16/2010.*) that there is not any motivation to combine Okada and GB 1057840 because Okada does not teach recovering the vapors, it is noted as discussed above that the Examiner does not disagree that one would not add the unpleasant smelling material to a food or drink, however, Okada is not cited for this but rather the typical extraction temperatures for coffee since GB 1057840 is silent.

12. In response to Applicant's arguments (*See p. 10, para. 4 of Applicant's Paper filed 3/16/2010.*) that Kino ('907) teaches away from using steam at above 130 °C because the taste that is produced is not good, it is noted that Kino ('907) is not cited for the temperature of the steam but rather the steam being deoxygenated. Producing steam without oxygen is typical as steam with air which includes oxygen is more corrosive, creates mechanical stress that non-condensable air can have on boiler/steam equipment and non-condensable oxygen in the steam leads to lower condensation/distillation efficiency since it presents a barrier to condensation and does not provide the vacuum as is the case with condensable steam and aromas.

13. In response to Applicant's conclusions (*See p. 11, paras. 2-3 of Applicant's Paper filed 3/16/2010.*) that it would not have been obvious to apply the same method of extracting aromas from coffee beans to ground coffee and tea for the dependent claims, it is noted that no further precise analysis is set forth to support said conclusions.

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14. In response to Applicant's arguments (*See p. 11, paras. 4-5 of Applicant's Paper filed 3/16/2010.*) that Takano does not teach the claimed features, it is noted that Applicant does not precisely address the cited teachings.

15. In response to Applicant's arguments (*See p. 11, paras. 6-7 of Applicant's Paper filed 3/16/2010.*) that Kazuyuki Yamashita does not teach the claimed features, it is noted that Applicant does not precisely address the cited teachings.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT T. O'HERN whose telephone number is

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(571)272-6385. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brent T O'Hern/
Examiner, Art Unit 1783
May 25, 2010

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1783